LISTING OF CLAIMS

For the convenience of the Examiner, all pending claims of the present Application are shown below:

Listing of Claims:

Claim 1 (Previously Presented): A method for making a tissue engineering scaffold for inducing formation of extracellular matrix by cells bound to the scaffold comprising covalently coupling matrix-enhancing molecules to the scaffold in an effective density to elicit production of extracellular matrix without increasing cellular proliferation, wherein when the matrix-enhancing molecules are TGF-β, the TGF-β is covalently coupled to the matrix by a polymer tether having a molecular weight between 2000 and 6000 and is in a density between 1 and 100 ng TGF-β/ml or in a concentration of between about 4×10^{-6} and 4 x 10-3 nmol/ml.

Claim 2 (Original): The method of claim 1 further comprising attaching cells to the scaffold.

Claim 3 (Original): The method of claim 1 wherein the matrix-enhancing molecules are angiotensin II.

Claim 4 (Original): The method of claim 1 wherein the matrix-enhancing molecules are insulin-like growth factor.

Claim 5 (Original): The method of claim 1 wherein the matrix-enhancing molecules are ascorbic acid.

Claim 6 (Cancelled).

Claim 7 (Original): The method of claim 1 wherein the scaffold is a hydrogel.

Claim 8 (Original): The method of claim 7 wherein the hydrogel is formed of a polymer selected from the group consisting of alginate, collagen, hyaluronic acid, and polyethylene glycol polymers.

Claim 9 (Original): The method of claim 7 wherein the matrix-enhancing molecules are TGF-β coupled to the hydrogel in a concentration of between about 4×10^{-6} and 4×10^{-3} nmol/ml.

Claims 10-23 (Cancelled).

Claim 24 (Previously Presented): A method for making a tissue engineering scaffold, the method comprising:

providing a scaffold, a polymer tether, and a matrix-enhancing molecule;

covalently coupling the polymer tether to the scaffold; and

covalently coupling the matrix-enhancing molecule to the scaffold, wherein the matrix-enhancing molecule is present at a concentration sufficient to elicit production of extracellular matrix by a cell attached to the tissue engineering scaffold without increasing cellular proliferation of the attached cell.

Claim 25 (Previously Presented): The method of claim 24 further comprising providing a cell attached to the tissue engineering scaffold.

Claim 26 (Previously Presented): The method of claim 24 further comprising providing a cell attached to the tissue engineering scaffold, wherein the cell is attached to the tissue engineering scaffold by constraining the cell within the scaffold.

Claim 27 (Previously Presented): The method of claim 24 further comprising providing a cell attached to the tissue engineering scaffold, wherein the cell is selected from the group consisting of smooth muscle cells, endothelial cells, fibroblasts, chondrocytes, and combinations thereof.

Claim 28 (Previously Presented): The method of claim 24 wherein the matrix enhancing molecule is TGF-β.

Claim 29 (Previously Presented): The method of claim 24 wherein the matrix enhancing molecule is TGF-β and the TGF-β is present at a density of between 1 and 100 ng TGF-β/ml or in a concentration of between about 4×10^{-6} and 4×10^{-3} nmol/ml.

Claim 30 (Previously Presented): The method of claim 24 wherein the matrix-enhancing molecule is angiotensin II.

Claim 31 (Previously Presented): The method of claim 24 wherein the matrix-enhancing molecule is insulin-like growth factor.

Claim 32 (Previously Presented): The method of claim 24 wherein the matrix-enhancing molecule is ascorbic acid.

Claim 33 (Previously Presented): The method of claim 24 wherein the scaffold is a hydrogel.

Claim 34 (Previously Presented): The method of claim 24 wherein the scaffold is a hydrogel comprising a polymer selected from the group consisting of alginate, collagen, hyaluronic acid, polyethylene glycol polymers, and combinations thereof.

Claim 35 (Previously Presented): The method of claim 24 wherein the polymer tether has a molecular weight between 200 and 10,000.